IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	:	10/799,826	**Confirmation No.**	:	8615
Applicant	:	SHIELD, Danielle R.	**Assignee**	:	Daffenberry, LLC
Filed	:	March 12, 2004	**Title**	:	Electronic Waste Management System
TC/A.U.	:	3689			
Examiner	:	RIVIERE, Heide M.			
Docket No.	:	020976-00100			
Customer No.	:	022904			

APPEAL BRIEF

Appellant hereby timely submits this Appeal Brief in response to the Notice of Appeal filed March 17, 2009. The Commissioner is authorized to charge the amount of $270.00 for the Appeal Brief and any remaining charges or credits to Deposit Acct. No. 12-1322/0020976-00100.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Daffenberry, LLC, which is a Texas limited liability company, to which this Application has been assigned by the Applicant.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-23 are pending and stand rejected for which the Appellant brings the present appeal to the Board. Claims 1, 3-15, and 17-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kasik* (U.S. Pat. No. 6,448,898) in view of *Hershey* (U.S. Pat. App. No. 6/108,524). Claims 2 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kasik* in view of *Hershey* and in further view of *Hassett* (U.S. Pat. No. 5,347,274). A copy of the claims on appeal is set forth in the Claims Appendix.

IV. STATUS OF AMENDMENTS

There are no outstanding amendments, as the amendment dated September 25, 2008, has been entered of record in the file. The claims in the Claims Appendix are the current claims.

V. SUMMARY OF CLAIMED SUBJECT MATTER

In general, the invention relates to collection and disposal of waste, and more specifically, the invention relates to a waste management system that handles and tracks waste from the producer of the waste to the disposal of the waste. *See, e.g.*, March 12, 2004, Patent Application No. 10/799,826 (hereinafter "Application") at pg. 1, ll. 3-5. The waste management system of the present invention is further adapted to process waste management data for tracking a location of a waste storage unit through a variety of locations, billing a customer associated with a waste removal, and paying personnel for services associated with the waste

removal. (See, e.g., Application pg. 3, l. 3 to 4, l. 4). These aspects are claimed in the two independent claims 1 and 12.

This waste management system of the present invention radically changes the paradigm in that the customary and well-accepted procedure is to use paper copies. (See, e.g., Application pg. 1, l. 7 to 3, l. 2). In a customary procedure, a roll-off or tractor-trailer waste truck driver leaves a dispatch office to start a route and is given a paper route sheet to direct the driver's activities for the day. (See, e.g., Application pg. 1, ll. 7-8). This is the first step in a very long paper trail that eventually leads to the driver getting paid, the customer receiving an invoice, and the waste company collecting on services rendered. (See, e.g., Application pg. 1, ll. 9-11). The truck driver executes the route assignment, collecting additional pieces of paper ("tickets") along the route. (See, e.g., Application pg. 1, ll. 11-12). When the driver hauls a box for a customer, he either handwrites a paper ticket and leaves a copy with the customer to record the activity or has no record that the activity occurred. (See, e.g., Application pg. 1, ll. 12-14). In some cases, the customer signs the ticket as a record of the haul. (See, e.g., Application pg. 1, ll. 14-15). The driver must also note information such as the roll-off box number on his route sheet. (See, e.g., Application pg. 1, ll. 15-16). Without an accurate record, the box can become lost. (See, e.g., Application pg. 1, ll. 16-17). Further, if the driver is transporting industrial waste, he must also have a manifest, which is a special document authorized and traceable by governmental agencies and created by the generator of the waste. (See, e.g., Application pg. 1, ll. 17-19). This document must be signed by the generator of the waste and taken by the driver to the landfill. (See, e.g., Application pg. 1, ll. 19-20). When the driver gets to the landfill, he receives a landfill ticket. (See, e.g., Application pg. 1, ll. 20-21). By the end of the haul, the driver is responsible for several tickets or other pieces of paper, which must be returned to the dispatch office in good condition. (See, e.g., Application pg. 1, ll. 21-23). The current system allows for information errors (forgotten information, bad handwriting,

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language barriers, falsified documents, and so forth) to accumulate through the creation and maintenance of data on these tickets. (See, e.g., Application pg. 1, ll. 23-25). The tickets contain important information, which places the responsibility on the driver to clearly and legibly collect accurate and complete information. (See, e.g., Application pg. 2, ll. 1-2).

Further, the waste collection industry often charges for demurrage time, that is, an excessive amount of time that the waste truck driver is at a customer's site to collect the waste. (See, e.g., Application pg. 2, ll. 3-5). Most customers are allowed a maximum amount of time that the driver spends on their site. (See, e.g., Application pg. 2, ll. 5-6). Any time logged after this maximum amount of time is billed as demurrage time. (See, e.g., Application pg. 2, ll. 6-7). The drivers often record the entire time that they are on-site as demurrage time. (See, e.g., Application pg. 2, l. 7). Existing systems rely on drivers to note how long they spend at a customer site for activities that can be classified as demurrage or billable time. (See, e.g., Application pg. 2, ll. 8-9). If the driver is paid by the hour or by demurrage time, there is an incentive to overestimate the amount of time at the customer's site. (See, e.g., Application pg. 2, ll. 9-11).

At the end of the day, these tickets are returned to the central office and used for many purposes including driver payrolls, customer invoicing, and third party payments. (See, e.g., Application pg. 2, ll. 12-13). Some persons have estimated that the enormous number of tickets generated by waste hauling companies in the United States total about 160,000 tickets per day. (See, e.g., Application pg. 2, ll. 14-15). Upon arrival at the office, a driver is debriefed to ensure that all paperwork was collected and is in order. (See, e.g., Application pg. 2, ll. 15-17). The tickets are then routed to the payroll, billing, and box tracking personnel. (See, e.g., Application pg. 2, l. 17). The various personnel input the data captured on the driver's tickets to a variety of software systems to pay the driver, track the location of equipment, and bill the customer. (See, e.g., Application pg. 2, ll. 17-19). In a lot of cases the same information is hand keyed into three

different systems by three different people. (See, e.g., Application pg. 2, 19-21). This results in a very labor intensive effort and accuracy can be poor. (See, e.g., Application pg. 2, l. 21). In some cases, the customer can refuse to sign or will sign a false name on the record of receipt and then the customer disclaims the services and refuses to pay. (See, e.g., Application pg. 2, ll. 22-23). In other cases, a driver can erroneously allege a haul, resulting in an invoice to a customer and an understandable negative reaction by the customer to an improper invoice. (See, e.g., Application pg. 2, ll. 23-25).

This typical industry-wide practice is fraught with inefficiencies and costs. (See, e.g., Application pg. 2, l. 26 to 3, l. 2). Thus, there remains a need for a more efficient system that substantially reduces or eliminates lost driver tickets, illegible tickets, tickets without appropriate customer signatures and required information. (See, e.g., Application pg. 2, ll. 26-28). There remains a need for a more efficient system that reduces the need for a billing department to collect, file and make customer copies of the driver tickets to accompany the invoice. (See, e.g., Application pg. 2, ll. 28-30). There also remains a need to automate the processing of the information to make a seamless and verifiable billing and payment system for the drivers and the customers serviced by the drivers. (See, e.g., Application pg. 2, l. 22 to 3, l. 2).

The present invention changes that paradigm, because it provides a system and method for electronically automating the solid waste hauling industry's existing paper system for tracking driver services. (See, e.g., Application pg. 3, ll. 4-5). For example, the system directs the driver through his daily activities, allowing changes and corrections to customer service data along a route. (See, e.g., Application pg. 3, ll. 5-7). This information is uploaded and converted to payroll data, customer service information, and invoicing for customers, among other aspects, periodically throughout the route or upon return to a home base after the route. (See, e.g., Application pg. 3, ll. 7-10). The information that is collected on site and in real time into a unit available to the driver during the route can require specific and traceable entries that improve

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the accuracy and completeness of the data useful to the waste management system. (See, e.g., Application pg. 3, ll. 10-13). The automation provides the information collected by a driver independently of additional clerks that heretofore have been used to input this information into a waste management system. (See, e.g., Application pg. 3, 13-15).

Independent claim 1 recites a system for waste management system.[1] (See, e.g., Application pg. 3, ll. 4-5, 16-25; pg. 6, ll. 9-12; Fig. 01). The system includes a waste management electronic base system having a memory, processor, an input element, and an output element (See, e.g., Application pg. 6, ll. 9-18; pg. 7, ll. 11-20; pg. 8, ll. 7-8; pg. 11, ll. 21-23; pg. 11, ll. 9-14; Fig. 01); the base system adapted to process waste management data for tracking a waste storage unit at a variety of locations (See, e.g., Application pg. 7, ll. 19-30; pg. 9, ll. 13-28; Fig. 01-28); billing a customer associated with a waste removal (See, e.g., Application pg. 8, ll. 5-8; pg. 9, ll. 1-13; Fig. 01); paying personnel for services associated with the waste removal (See, e.g., Application pg. 8, ll. 10-20; Fig. 01); an electronic portable unit having a memory, processor, an input element, and an output element (See, e.g., Application pg. 10, ll. 21-23; pg. 11, ll. 14-18; Fig. 01); the portable unit adapted to allow an operator during the waste removal to use the portable unit and to allow onsite input at a customer facility from preprogrammed queries regarding the waste removal and further being adapted to generate an output of the data to the base system for processing (See, e.g., Application pg. 7, ll. 8-20; pg. 10, ll. 21-23; Fig. 01-28).

Dependent claim 2 recites a system comprising a waste removal vehicle, wherein the waste storage unit is selectively coupled with the waste removal vehicle (See, e.g., Application pg. 7, ll. 26-30; pg. 9, ll. 14-28).

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[1] The disclosure of the subject matter in the claims is found throughout the application. The recited page. numbers and line numbers for the elements in the claims are exemplary and not meant to be limiting or exclude other related disclosure in the application.

Dependent claim 3 recites a system wherein the waste comprises industrial waste and the system is adapted to comply with a manifest associated with the industrial waste (See, e.g., Application pg. 7, ll. 17-20; pg. 13, ll. 4-19; pg. 13, ll. 28-29; pg. 26, l. 22 to pg. 27, l. 6; Fig. 23).

Dependent claim 4 recites a system wherein the base system generates a manifest based on information from a generator of waste obtained from the portable unit (See, e.g., Application pg. 7, ll. 17-20; pg. 13, ll. 10-19, pg. 21, ll. 20-21; pg. 26, l. 22 to pg. 27, l. 6; Fig. 23).

Dependent claim 5 recites a system wherein the onsite input allows operator input, automatic input, or a combination thereof (See, e.g., Application pg. 15, ll. 4-11; pg. 16, ll. 17-23; pg. 20, ll. 11-15; pg. 26, l. 30 to pg. 27, l. 15).

Dependent claim 6 recites a system wherein the onsite input comprises a scanner, keyboard, touch screen, wireless interface, voice recognition interpreter, preprogrammed cards, or a combination thereof (See, e.g., Application pg. 19, ll. 23-27; pg. 27, ll. 1-3).

Dependent claim 7 recites a system wherein the portable unit output comprises a wireless interface with the base system (See, e.g., Application pg. 6, ll. 13-18; pg. 8, ll. 5-9; pg. 9, ll. 21-22; pg. 18, ll. 7-10).

Dependent claim 8 recites a system wherein the system further comprises multiple portable units for multiple operators during their respective routes for multiple waste removals (See, e.g., Application pg. 9, l. 29 to pg. 10, l. 2; pg. 29, ll. 23-27).

Dependent claim 9 recites a system wherein the base system is adapted to provide download information to the portable unit, the information containing instructions to the operator for a route of the operator (See, e.g., Application pg. 6, ll. 15-17; pg. 8, ll. 1-4).

Dependent claim 10 recites a system wherein the portable unit is adapted to require predetermined operator input for a first operation to release the operator to perform a next operation (See, e.g., Application pg. 6, ll. 24-25; pg. 7, ll. 8-11; pg. 7, ll. 23-25).

Dependent claim 11 recites a system wherein the portable unit is adapted to output an invoice for a customer at the customer site relative to the waste removal (See, e.g., Application pg. 7, ll. 11-12).

Independent claim 12 recites a method that generally relates to managing waste removal. (See, e.g., Application pg. 3, ll. 4-5; pg. 3, ll. 26 – 4, ll. 4). The method includes using a waste management electronic base system having a memory, processor, an input element, and an output element, to process waste management data (See, e.g., Application pg. 6, ll. 9-18; pg. 7, ll. 11-20; pg. 8, ll. 7-8; pg. 11, ll. 21-23; pg. 11, ll. 9-14; Fig. 01); tracking a waste storage unit at a variety of locations (See, e.g., Application pg. 7, ll. 19-30; pg. 9, ll. 13-28; Fig. 01-28); billing a customer associated with a waste removal (See, e.g., Application pg. 8, ll. 5-8; pg. 9, ll. 1-13; Fig. 01); and paying personnel for services associated with the waste removal. (See, e.g., Application pg. 8, ll. 10-20; Fig. 01). The method further includes using an electronic portable unit having a memory, processor, an input element, and an output element, to gather onsite data for the base system (See, e.g., Application pg. 10, ll. 21-23; pg. 11. ll. 14-18; Fig. 01); allowing an operator to input onsite data at a customer facility into the portable unit from preprogrammed queries regarding the waste removal; and generating an output of the data to the base system for processing. (See, e.g., Application pg. 7, ll. 8-20; pg. 10, ll. 21-23; Fig. 01-28).

Dependent claim 13 recites a method further comprising downloading information from the base system to the portable unit, the information containing instructions to the operator for a route of the operator (See, e.g., Application pg. 6, ll. 15-17; pg. 8, ll. 1-4).

Dependent claim 14 recites a method further comprising requiring predetermined operator input for a first operation to release the operator to perform a next operation (See, e.g., Application pg. 6, ll. 24-25; pg. 7, ll. 8-11; pg. 7, ll. 23-25).

Dependent claim 15 recites a method further comprising scanning input information into the portable unit regarding a waste storage unit (See, e.g., Application pg. 19, ll. 23-27; pg. 27, ll. 1-3).

Dependent claim 16 recites a method further comprising selectively coupling the waste storage unit with the waste removal vehicle (See, e.g., Application pg. 7, ll. 26-30; pg. 9, ll. 14-28).

Dependent claim 17 recites a method wherein the waste comprises an industrial waste and further comprising generating a manifest associated with the industrial waste (See, e.g., Application pg. 7, ll. 17-20; pg. 13, ll. 4-19; pg. 13, ll. 28-29; pg. 26, l. 22 to pg. 27, l. 6; Fig. 23).

Dependent claim 18 recites a method further comprising accepting an electronic manifest into the portable unit (See, e.g., Application pg. 7, ll. 17-20; pg. 13, ll. 10-19, pg. 21, ll. 20-21; pg. 26, l. 22 to pg. 27, l. 6; Fig. 23).

Dependent claim 19 recites a method further comprising generating an invoice from the portable unit for a customer at the customer site relative to the waste removal (See, e.g., Application pg. 7, ll. 11-12).

Dependent claim 20 recites a method further comprising providing the onsite input with operator input, automatic input, or a combination thereof (See, e.g., Application pg. 15, ll. 4-11; pg. 16, ll. 17-23; pg. 20, ll. 11-15; pg. 26, l. 30 to pg. 27, l. 15).

Dependent claim 21 recites a method further comprising providing the onsite input by a scanner, keyboard, touch screen, wireless interface, voice recognition interpreter, preprogrammed cards, or a combination thereof (See, e.g., Application pg. 19, ll. 23-27; pg. 27, ll. 1-3).

Dependent claim 22 recites a method further comprising sharing information between the portable unit and the base system through a wireless interface (See, e.g., Application pg. 6, ll. 13-18; pg. 8, ll. 5-9; pg. 9, ll. 21-22; pg. 18, ll. 7-10).

Dependent claim 23 recites a method further comprising requiring a predetermined operator input for a first operation before releasing the operator to perform a next operation (See, e.g., Application pg. 6, ll. 24-25; pg. 7, ll. 8-11; pg. 7, ll. 23-25).

The invention differs from the cited references by the Office of *Kasik*, *Hershey*, and *Hassett*, separately or in combination as cited. *Kasik* in view of *Hershey* does not provide a waste management system for tracking the location of a solid waste container through a variety of sites that integrates billing, payroll, and pre-programmed queries, or series of inter-related questions, to direct the operator's actions. Indeed, *Kasik* teaches a system for tracking waste containers located at fixed locations on a standard route. Moreover, the only verification by the operator is that the solid waste container is at the address where it is supposed to be located. Furthermore, *Kasik* in view of *Hershey* does not make up these deficiencies, because *Hershey* teaches tracking a container or an asset by using asymmetrical transmission system using GPS. In essence, when a series of containers are traveling together, *Hershey* teaches using the GPS located on the container that has the best battery life to transmit the location for the group of containers. The combination of *Kasik* and *Hershey* is illogical, and if one were to attempt to combine *Kasik* with *Hershey*, the combination would teach away of the present invention. Further, any attempt to combine would require undue experimentation, and even then is unlikely to produce the system or method of the claimed invention. The further combination of *Kasik* with *Hershey* in view of *Hassett* does not make-up for the deficiencies described above.

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A.   Claims 1, 3-15, 17-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Kasik* (U.S. 6,448,898 B1) in view of *Hershey et al.* (US 6,108,524).

Although the Examiner admits that *Kasik* does not teach all of the limitations, the Examiner alleges that *Kasik* teaches billing a customer associated with a waste removal; paying personnel for services associated with the waste removal; an electronic portable unit where the portable unit is adapted to allow an operator during the waste removal to use the portable unit and to allow onsite input at a customer facility from preprogrammed queries regarding the waste removal and further being adapted to generate an output of the data to a base system for processing. Specifically, the Examiner admits that *Kasik* does not teach a waste management electronic base system having a memory adapted to process waste management data tracking a waste storage unit at a variety of locations, but alleges that *Hershey* teaches these limitations, and asserts that the combination of *Kasik* in view of *Hershey* would make the above claims obvious.

B.   Claims 2 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Kasik* in view of *Hershey* and further in view of *Hassett* (US 5,347,274).

Although the Examiner admits that *Kasik* and *Hershey* do not teach a waste removal vehicle wherein the waste storage unit is selectively coupled with the waste removal vehicle, the Examiner alleges that *Hassett* teaches a waste removal vehicle wherein the waste storage unit is selectively coupled with the waste removal vehicle, and asserts that the combination of *Kasik* and *Hershey* further in view of *Hershey* would make the above claims obvious.

VII.   ARGUMENT

A.   Summary of Argument

Applicant respectfully traverses the rejections and does not accede to the Office's characterization of *Kasik*, *Hershey* or *Hassett*. Further, the combinations of *Kasik, Hershey* and *Hassett* do not render the present invention obvious. The combinations do not teach, show,

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suggest or hint at the present invention, or provide the motivation for the present invention. Finally, the specific combination of *Kasik* and *Hershey* is improper, as the references teach against each other. In the recent Supreme Court decision, *KSR Intern. Co. v. Teleflex Inc.*, the Court stated, "A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art. Although common sense directs caution as to a patent application claiming as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does." *KSR Intern. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1731, 82 USPQ2d 1385, 1389 (2007). If a first reference "did in fact teach away from [a second reference], then that finding alone can defeat [an] obviousness claim." *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 53 USPQ2d 1580, 1589 (Fed. Cir. 2000).

"A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning. See *Graham*, 383 U.S. at 36, 86 S.Ct. 684 (warning against a 'temptation to read into the prior art the teachings of the invention in issue' and instructing courts to " 'guard against slipping into the use of hindsight' " (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (C.A.6 1964)))." *KSR*, 127 S.Ct. at 1742. Further, it "is difficult but necessary that the decision maker forget what he or she has been taught . . . about the claimed invention and cast the mind back to the time the invention was made (often as here many years), to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art." (MPEP § 2141.01, citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 7231 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)). "The references must be viewed without the benefit of impermissible hindsight vision

afforded by the claimed invention." MPEP § 2141 (citing *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986)).

B.   Claims 1, 3-15, 17-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Kasik* (U.S. 6,448,898 B1) in view of *Hershey et al.* (US 6,108,524).

Although *Kasik* teaches a refuse collection system, *Kasik* only teaches a system where the refuse container is located at a single pre-established and known location that is picked up on a generally pre-established schedule.   Among other deficiencies, *Kasik* provides no disclosure of a waste management system that tracks the location of a waste storage unit through a variety of locations, bills a customer associated with a waste removal, and pays personnel for services associated with the waste removal.   Moreover, *Kasik* in view of *Hassett* and *Hershey* do not make up for the deficiencies of *Kasik*.

> *1.   Kasik teaches away from the present invention by focusing on solid waste containers located at fixed and assigned known locations.*

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant," *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); see also *KSR*, 127 S.Ct. at 1739-40 ("when the prior art teaches away from [a claimed invention, then that invention] is more likely to be non-obvious").

In summary, the Examiner argues that *Kasik* in view of *Hershey* and/or *Hassett* makes the present invention obvious. However, the Office's primary reference, *Kasik*, teaches a refuse collection system for a refuse container at a single, fixed known location (e.g., a refuse container assigned to a house) on a generally pre-established schedule.   As described in general from col. 1, l. 58 through col. 2, l. 49, *Kasik* stands for a collection service that takes the steps to empty the container at the known location.   To increase efficiency of service, *Kasik* provides a flag to signal when a container has been accessed and when it has been emptied. The operator can empty only those containers having a signaling device which indicates the

particular container has been accessed to add waste to the container, and can bypass others that have not been accessed to add waste. Indeed, if the container is moved to another location, then apparently the waste at the new location would be incorrectly billed to the wrong customer. The billing to such locations can be based on the number of times the containers at that location have been serviced and emptied. To verify the access, steps are taken, preferably automatically, to identify the subscriber (e.g., by the known address of the container, which does not change) and to store data corresponding to each transaction.

In more detail, *Kasik* describes tracking identification of the subscriber (customer) such as by address, which can include the address or other markings on the container to identify the particular subscriber to which the container is assigned. (Col. 6, ll. 53-64; col. 7, ll. 5-34.) A data receptor such as a CCD camera is positioned to inspect the containers addressed by the service vehicle, such as on the lifting mechanisms to capture the video record of the service at that location and time. (Col. 8, l. 35 - col. 9, l. 30.) When the automatic reading and processing does not occur, an alarm can be sent to the operator for manual entry. (Col. 9, ll. 30-50.) The stored data can be downloaded and transferred to a central processing unit, which can be processed to produce customer billing according to the number of times the subscriber's container has been emptied, the weight of the contents, and so forth which can reflect the actual cost of the services performed. (Col. 10, ll. 61-67.)

Thus, while *Kasik* relates to a system for processing waste containers, it does not track a waste storage unit that can be "at a variety of locations," as specifically required in both independent claims 1 and 12. *Kasik* is based on and does not disclose otherwise that the identified container is *at the assigned and proper location*. In fact, if the container was inadvertently at another location, *Kasik*'s system does not have a disclosure or method to be able to track differently and the service on that container at the other location apparently would be billed to the wrong customer. As the Examiner agreed in the Final Office Action, *Kasik*

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simply has no teaching for tracking the whereabouts of a container. (Final Office Action, pg. 3, last line through first paragraph on pg. 4.)

In the Applicant's prior responses, the Applicant amended the two independent claims to clarify that the containers can be at a variety of locations and the contemplated invention tracks the whereabouts of the containers at the possible variety of locations. Thus, in contrast to *Kasik*, the location of the container is tracked, so that the container can be located and the proper billing can be performed, the container can be recovered and other aspects. Such aspects are disclosed throughout the application, including Figures 11, 15, and 19 as exemplary, and at pg. 7, ll. 26-30, pg. 9, ll. 14-28, pg 19, ll. 5-30, pg 21, l. 27 to pg 22, l. 8, and pg 24, ll. 5-26, as exemplary.

Thus, *Kasik* teaches away from tracking the location of a solid waste container at a variety of locations as disclosed by the present invention.

2. *Kasik in view of Hershey teaches away from the present invention, because the references are incompatible to combine without undue experimentation.*

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant," *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); see also *KSR*, 127 S.Ct. 1727, 1739-40 (2007) ("when the prior art teaches away from [a claimed invention, then that invention] is more likely to be non-obvious").

In the Final Office Action, *Hershey* is referenced in combination with *Kasik,* using prohibited hindsight, in an attempt to overcome the shortcomings of *Kasik* as it relates to the present invention. Although in a generic sense *Hershey* discloses the tracking of assets (goods, vehicles, containers) using an asymmetrical high frequency messaging system, (e.g., Col. 1, ll.

7-11; Col. 2, ll. 14-63), *Kasik* in view of *Hershey* would not teach or enable one skilled in the art to practice the present invention without Applicant's application as a road map or undue experimentation.

First, *Hershey* discloses various aspects of tracking a container or an asset by using asymmetrical transmission system, (Col. 3, l. 59 – Col. 4, l. 32; Col. 5, l. 62 – Col. 6 l. 45), which tests frequencies before transmitting data on the location of an asset, (Col. 7, ll. 4-51), i.e., a rail car or container on a train. (Col. 4, ll. 59-65). *Hershey* further discloses multiple receivers in communication with each other to minimize power consumption and to identify the unit with the most power to transmit the data on the various containers or assets in communication with each other in a specific area, namely on a moving train, to receivers spaced across some geographic area, such as the continental United States. (Col. 5, l. 43 – Col. 6, l. 2)

Giving the combination of *Kasik* and *Hershey* the broadest conceivable meaning, the combination would not teach or result in the claim element of "a waste management electronic base system … adapted to process waste management data for tracking a waste storage unit at a variety of locations…" In contrast, the combination of *Kasik* with *Hershey* is inappropriate in that the two references teach away from each other. *Kasik* has no need of the system of *Hershey*. *Further, the application of Hersey with Kasik would be counterproductive and wasteful*, because *Kasik*'s containers are situated at known addresses and do not need tracking. Indeed, for the billing of *Kasik* to even function, this underlying concept <u>requires</u> that the identified container is *at the assigned and proper location.*

Stated differently, the combination of *Kasik* and *Hershey* simply would not teach or enable one skilled in the art how to practice the present invention, certainly without undue experimentation. For example, the technologies disclosed in *Kasik* (recording stops at predetermined locations with operator oversight) and *Hershey* (automated tracking of moving assets using asymmetrical transmissions and geographically dispersed high frequency

receivers) would not logically integrate with each other. The purpose and teachings of *Hershey* are not applicable or even translatable to the present invention for tracking a solid waste container at multiple locations.

Thus, one skilled in the art would not readily appreciate or envision that some predictable or foreseeable result would occur from the combination of *Kasik* and *Hershey*, or that the disclosures of *Kasik* and *Hershey* are even compatible with each other. There is simply no logical or reasonable basis, teaching, suggestion, motivation, or even hint to combine or attempt to combine *Kasik* and *Hershey* to achieve a predictable result.

3. **The cited combination does not make obvious the claimed invention, because the combination still leaves missing elements required in both independent claims and claims depending therefrom.**

Independent claims 1 and 12 require allowing an operator to input onsite data at a customer facility *from preprogrammed queries* regarding the waste removal. Neither *Kasik* nor *Hershey* discloses allowing onsite input at a customer facility *from preprogrammed queries* regarding the waste removal. *Hershey* does not have an operator, let alone any operator input involved in any aspect of the automated asymmetrical transmission system for tracking assets. Although *Kasik* discloses an alarm to the operator if the automatic reading of the container's identification is not able to identify the container or record the service provided, *Kasik* has no teaching of a system of "preprogrammed queries." As the term is used herein, "preprogrammed queries" includes a sequence of steps that guide the operator through a defined set of questions, instructions, or options. Such aspect is found throughout the application, including Figures 5, 7-16, 19, 21, 22-24, and 26-27 as exemplary, and at pg. 7, ll. 8-20, pg. 14, l. 25 to pg. 15, l. 11, pg. 16, ll. 11-23, pg. 17, l. 30 to pg. 18, l. 5, pg. 18, ll. 14-27, pg. 20, ll. 1-22, and pg. 21, ll. 15-26, as exemplary. The complexities of certain aspects of the system and proper recordation of desired or necessary information are assisted by the preprogrammed system of queries. *Kasik* has no teaching for such preprogrammed queries, and in contrast discloses

automatic recognition of the container, weight, and other characteristics needed. Only if there is an error, does *Kasik* suggest manual input of any information. That being said, in no event does *Kasik* disclose guiding the operator through a series of preprogrammed queries.

4. *The cited combination of Kasik and Hershey further does not make obvious the dependent claims.*

As stated above, *Kasik* and *Hershey*, individually or in combination, do not teach, show, or suggest or provide motivation to make obvious independent claims 1 and 12, and therefore would not make obvious by law any claim depending therefrom. However, the dependent claims are separately patentable for at least the following reasons.

Dependent claim 3 requires "wherein the waste comprises industrial waste and the system is adapted to comply with a manifest associated with the industrial waste." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at a waste system for different types of industrial waste that is adapted to handle the governmental requirements for a manifest, which is by law dependent on the particular waste type. Neither *Kasik* nor *Hershey* has any teaching for determining the type of waste, among other aspects.

Dependent claim 4 recites "wherein the base system generates a manifest based on information from a generator of waste obtained from the portable unit." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at generating a manifest based on information from a generator of waste obtained from the portable unit. Neither *Kasik* nor *Hershey* has any teaching for determining the type of waste, among other aspects, that is required to be able to generate a manifest.

Dependent claim 5 recites "wherein the onsite input allows operator input, automatic input, or a combination thereof." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at "onsite input allows operator input, automatic input, or a

combination thereof." Furthermore, *Hershey* does not teach the use of an operator, nor does it provide motivation to integrate a system or method that uses an operator.

Dependent claim 9 recites "wherein the base system is adapted to provide download information to the portable unit, the information containing instructions to the operator for a route of the operator." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at a "base system is adapted to provide download information to the portable unit, the information containing instructions to the operator for a route of the operator." Furthermore, *Hershey* does not teach the use of an operator, nor does it provide motivation to integrate a system or method that uses an operator.

Dependent claim 10 recites "wherein the portable unit is adapted to require predetermined operator input for a first operation to release the operator to perform a next operation." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at a "portable unit is adapted to require predetermined operator input for a first operation to release the operator to perform a next operation." Furthermore, *Hershey* does not teach the use of an operator, nor does it provide motivation to integrate a system or method that uses an operator.

Dependent claim 11 recites "wherein the portable unit is adapted to output an invoice for a customer at the customer site relative to the waste removal." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at billing a customer at the site. *Kasik* teaches gathering information for billing and downloading the information, but fails to disclose generating an invoice at the customer site. Rather, *Kasik* teaches using the collected information over time "of the services performed" that apparently creates an aggregated bill from multiple service times, "e.g., according to the number of times the subscriber's container has been emptied . . ." (Col. 10, ll. 61-67). *Hershey* has no billing references at all.

Dependent claim 13 recites "downloading information from the base system to the portable unit, the information containing instructions to the operator for a route of the operator." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at "downloading information from the base system to the portable unit, the information containing instructions to the operator for a route of the operator." Furthermore, *Hershey* does not teach the use of an operator, nor would it be able to integrate a system or method that uses an operator.

Dependent claim 14 recites "requiring predetermined operator input for a first operation to release the operator to perform a next operation." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at "requiring predetermined operator input for a first operation to release the operator to perform a next operation." Furthermore, *Hershey* does not teach the use of an operator, nor would it be able to integrate a system or method that uses an operator.

Dependent claim 17 requires "wherein the waste comprises industrial waste and further comprising generating a manifest associated with the industrial waste." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at a waste system for different types of industrial waste that is adapted to handle the governmental requirements for a manifest, which is by law dependent on the particular waste type. Neither *Kasik* nor *Hershey* has any teaching for determining the type of waste, among other aspects.

Dependent claim 18 recites "accepting an electronic manifest into the portable unit." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at "accepting an electronic manifest into the portable unit."

Dependent claim 19 recites "generating an invoice from the portable unit for a customer at the customer site relative to the waste removal." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at generating an invoice for a customer at

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the site. *Kasik* teaches gathering information for billing and downloading the information, but fails to disclose generating an invoice at the customer site. Rather, *Kasik* teaches using the collected information over time "of the services performed" that apparently creates an aggregated bill from multiple service times "e.g., according to the number of times the subscriber's container has been emptied..." (Col. 10, ll. 61-67). *Hershey* has no billing references at all.

Dependent claim 20 recites "providing the onsite input with operator input, automatic input, or a combination thereof." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at "providing the onsite input with operator input, automatic input, or a combination thereof." Furthermore, *Hershey* does not teach the use of an operator, nor would it be able to integrate a system or method that uses an operator.

Dependent claim 23 recites "requiring a predetermined operator input for a first operation before releasing the operator to perform a next operation." None of the cited references, alone or in combination, discusses, suggests, teaches or hints at "requiring a predetermined operator input for a first operation before releasing the operator to perform a next operation." Furthermore, *Hershey* does not teach the use of an operator, nor would it be able to integrate a system or method that uses an operator.

Without limitation, other dependent claims not specifically discussed may be separately patentable and the above discussion on the independent and dependent claims in no way is meant to preclude any separate patentability of one or more of the dependent claims.

C.   Claims 2 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Kasik* in view of *Hershey* and further in view of *Hassett* (US 5,347,274).

As described above, *Kasik* in combination with *Hershey*, individually or in combination, does not teach, show, or suggest or provide motivation for independent Claims 1 and 12. Therefore, claims 2 and 16 are at least patentable as being dependent on claims 1 and 12.

Further, *Hassett* does not supply the deficiency. Therefore, claims 2 and 16 are believed to be also allowable for at least these reasons.

Without limitation, other dependent claims not specifically discussed may be separately patentable and the above discussion on the independent and dependent claims in no way is meant to preclude any separate patentability of one or more of the dependent claims.

D.   CONCLUSION

In conclusion, the cited references, alone or in combination, do not teach, show, or suggest or provide motivation for such regarding the present invention. Therefore, it is believed that the rejections are erroneous and the claims are in condition for allowance. A decision of the Board consistent with this showing is earnestly requested.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1.   (Previously presented) A waste management system, comprising:

a.   a waste management electronic base system having a memory, processor, an input element, and an output element, the base system adapted to process waste management data for tracking a waste storage unit at a variety of locations, billing a customer associated with a waste removal, and paying personnel for services associated with the waste removal; and

b.   an electronic portable unit having a memory, processor, an input element, and an output element, the portable unit adapted to allow an operator during the waste removal to use the portable unit and to allow onsite input at a customer facility from preprogrammed queries regarding the waste removal and further being adapted to generate an output of the data to the base system for processing.

2.   (Previously presented) The system of claim 1, further comprising a waste removal vehicle, wherein the waste storage unit is selectively coupled with the waste removal vehicle.

3.   (Original) The system of claim 1, wherein the waste comprises industrial waste and the system is adapted to comply with a manifest associated with the industrial waste.

4.   (Original) The system of claim 1, wherein the base system generates a manifest based on information from a generator of waste obtained from the portable unit.

5.   (Original) The system of claim 1, wherein the onsite input allows operator input, automatic input, or a combination thereof.

6.   (Original) The system of claim 1, wherein the onsite input comprises a scanner, keyboard, touch screen, wireless interface, voice recognition interpreter, preprogrammed cards, or a combination thereof.

7.   (Original) The system of claim 1, wherein the portable unit output comprises a wireless interface with the base system.

8.   (Original) The system of claim 1, wherein the system further comprises multiple portable units for multiple operators during their respective routes for multiple waste removals.

9.   (Original) The system of claim 1, wherein the base system is adapted to provide download information to the portable unit, the information containing instructions to the operator for a route of the operator.

10.   (Original) The system of claim 1, wherein the portable unit is adapted to require predetermined operator input for a first operation to release the operator to perform a next operation.

11.   (Original) The system of claim 1, wherein the portable unit is adapted to output an invoice for a customer at the customer site relative to the waste removal.

12.   (Previously presented) A method of managing waste removal, comprising:

    a.   using a waste management electronic base system having a memory, processor, an input element, and an output element, to process waste management data, comprising:

        i.   tracking a waste storage unit at a variety of locations;

        ii.   billing a customer associated with a waste removal; and

        iii.   paying personnel for services associated with the waste removal; and

    b.   using an electronic portable unit having a memory, processor, an input element, and an output element, to gather onsite data for the base system, comprising:

i.	allowing an operator to input onsite data at a customer facility into the portable unit from preprogrammed queries regarding the waste removal; and

ii.	generating an output of the data to the base system for processing.

13.	(Original) The method of claim 12, further comprising downloading information from the base system to the portable unit, the information containing instructions to the operator for a route of the operator.

14.	(Original) The method of claim 12, further comprising requiring predetermined operator input for a first operation to release the operator to perform a next operation.

15.	(Original) The method of claim 12, further comprising scanning input information into the portable unit regarding a waste storage unit.

16.	(Previously presented) The method of claim 12, further comprising selectively coupling the waste storage unit with the waste removal vehicle.

17.	(Original) The method of claim 12, wherein the waste comprises an industrial waste and further comprising generating a manifest associated with the industrial waste.

18.	(Original) The method of claim 12, further comprising accepting an electronic manifest into the portable unit.

19.	(Original) The method of claim 12, further comprising generating an invoice from the portable unit for a customer at the customer site relative to the waste removal.

20. (Original) The method of claim 12, further comprising providing the onsite input with operator input, automatic input, or a combination thereof.

21. (Original) The method of claim 12, further comprising providing the onsite input by a scanner, keyboard, touch screen, wireless interface, voice recognition interpreter, preprogrammed cards, or a combination thereof.

22. (Original) The method of claim 12, further comprising sharing information between the portable unit and the base system through a wireless interface.

23. (Original) The method of claim 12, further comprising requiring a predetermined operator input for a first operation before releasing the operator to perform a next operation.

IX.   EVIDENCE APPENDIX

No external evidence is being submitted.

X.   RELATED PROCEEDINGS APPENDIX

There are no related proceedings.